

Appl. No. 10/622,081  
Response to Restriction dated March 14, 2006  
Restriction Requirement mailed February 16, 2006

PATENT

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. - 24. (canceled)

25. (previously presented) A method for diagnosis of a myocardial infarction of a patient, the method comprising:

measuring multiple-lead electrocardiogram data of multiple reference patients undergoing coronary angioplasty;

sorting the measured data into groups, each group having a correlation between measured data from one or more of the reference patients with a heart region having temporary, angioplasty-induced ischemia;

measuring multiple-lead electrocardiogram data from the patient; and  
identifying a location of the infarction using the correlations and the electrocardiogram data from the patient.

26. (previously presented) The method of claim 25, wherein the location is taken from a group consisting of an anteroseptal location, an inferior location, and a posterolateral location.

27. (previously presented) The method of claim 25, further comprising generating a map based on the electrocardiogram data of the patient.

28. (previously presented) The method of claim 27, wherein generating a map comprises processing the ischemia region data and the electrocardiogram data to determine electrocardiogram characteristics that relate to the ischemia regions.

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29. (previously presented) The method of claim 28, wherein processing the ischemia region data and the electrocardiogram data comprises generating a map from an electrocardiogram characteristic comprising one of the following: ST elevation data; reciprocal ST depression data; QRS complex data; and QRST segment data.

30. (previously presented) The method of claim 27, further comprising determining a magnitude of the ischemia.

31. (previously presented) The method of claim 30, wherein determining the magnitude of the ischemia comprises determining a location of an occlusion within an artery related to the ischemia, wherein the location of the occlusion correlates to a portion of the heart effected by ischemia.

32. (previously presented) The method of claim 31, wherein determining the location of the occlusion comprises differentiating between proximal occlusions, middle occlusions, and distal occlusions.

33. (previously presented) A method for diagnosis of a myocardial infarction of a patient, the method comprising:

- acquiring multiple-lead electrocardiogram data of multiple patients while the patients are suspected to be experiencing ischemia;
- confirming that the patients experienced ischemia;
- sorting the acquired data into groups, the groups correlating measured data from one or more of the patients with ischemia in a heart region; and
- identifying a location of the infarction from the correlated group data.

34. (previously presented) The method of claim 33, wherein the confirming step comprises conducting at least one of: an angiogram procedure; a cardiac marker analysis; a thallium scan; and an echocardiograph procedure.

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35. (previously presented) The method of claim 33, further comprising generating a map based on the acquired data by processing the confirmed ischemia data and the acquired data to determine electrocardiogram characteristics that relate to ischemia characteristics.

36. (previously presented) The method of claim 35, wherein processing the confirmed ischemia data and the acquired data comprises generating a map from an electrocardiogram characteristic comprising one of the following: ST elevation data; reciprocal ST depression data; QRS complex data; and QRST segment data.

37. (previously presented) The method of claim 33, further comprising determining the magnitude of the infarction by determining the location of an occlusion within an artery related to the infarction, wherein the location of the occlusion correlates to a portion of the heart effected by the infarction.